

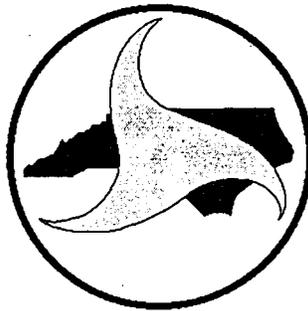
FEASIBILITY STUDY

Rocky Mount

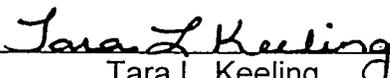
SR 1604 (Hunter Hill Rd.)
from SR 1616 (Country Club Rd.)
to NC 43-48 (Benvenue Rd.)
Nash County

Division 4

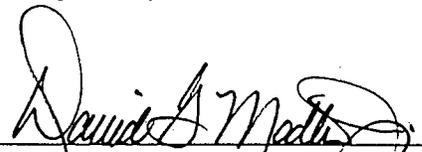
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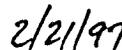


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Rocky Mount
SR 1604 (Hunter Hill Rd.)
from SR 1616 (Country Club Rd.)
to NC 43-48 (Benvenue Rd.)
Nash County
U-3621

I. General Description

This feasibility study describes widening SR 1604 (Hunter Hill Road) from SR 1616 (Country Club Rd.) to NC 43-48 (Benvenue Rd.), a distance of 1.2 miles (1.9 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide with 10-foot (3.0 m) berms on 100 feet (30.5 m) of right-of-way with no access control. It is anticipated that there will be no residences or businesses relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$6,600,000.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

II. Need for Project

The purpose of this project is to reduce congestion throughout the project area and to provide additional capacity for anticipated commercial growth. This project is supported by the Eastern North Carolina Chamber of Commerce and the Rocky Mount Transportation Advisory Committee (TAC).

SR 1604 is designated as a major thoroughfare in the Rocky Mount Thoroughfare Plan and as a minor urban arterial in the North Carolina Statewide Functional Classification System.

Development along the project is primarily residential. There are several clusters of commercial retail centers at the project termini and at the US 301 Bypass, where additional development is anticipated.

SR 1604 is currently a two-lane roadway with a pavement width of 24 feet (7.3 m) and soil shoulders on approximately 60 feet (18.3 m) of right-of-way.

There is one structure within the project limits. Bridge No. 181 is a reinforced concrete structure on steel I-beams that carries SR 1604 over US 301 Bypass. Built in 1955, this bridge is 195 feet (59.5 m) long and has a clear deck width of 26.5 feet (8.1 m). This bridge currently has a sufficiency rating of 49.8 and is due to be replaced under TIP Project B-3357, which is currently scheduled for right-of-way acquisition in March 2000 and for construction in June 2001.

Two intersections within the project are currently signalized. There are signals at the intersections with SR 1616 (Country Club Rd.) and NC 43-48 (Benvenue Rd.).

TIP Project U-3331 will widen SR 1616 (Country Club Rd.) to a five-lane curb and gutter section from US 64 Business to SR 1541 (Jefferys Rd.). It is currently scheduled for right-of-way acquisition in October 2001 and for construction in September 2003.

The 1996 Average Daily Traffic (ADT) along SR 1604 is approximately 12,400 vehicles per day (vpd). For the design year 2015, the estimated traffic volume on SR 1604 will be 24,700 vpd. Truck traffic is estimated to make up three percent of daily traffic.

Currently SR 1604 is operating at Level of Service (LOS) C. If no improvements are made, it is projected that the roadway will operate at LOS F in the design year 2015. If SR 1604 is widened to a five-lane curb and gutter section and assuming the construction of U-3331, the facility will operate at LOS B in the current year and at LOS D in the design year 2015.

During the three-year period from February 1993 to January 1996, there were 162 accidents reported on SR 1604 within the project limits. These accidents produced 90 injuries; no fatalities were reported. The accident rate along SR 1604 within the project limits is 1,743.20 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1994 statewide rate of 340.50 acc/100mvm for two-lane urban secondary roads. Forty-four percent of these accidents were "rear-end slow or stop" accidents. Widening the roadway to a multilane section will help greatly reduce the number of these types of accidents.

III. Recommendations

It is recommended to widen SR 1604 (Hunter Hill Road) from SR 1616 (Country Club Rd.) to NC 43-48 (Benvenue Rd.), a distance of 1.2 miles (1.9 km). The project location is shown on Figure 1. The recommended cross-section is a five-lane curb and gutter section, 64 feet (19.5 m) wide with 10-foot (3.0-m) berms on 100 feet (30.5 m) of right-of-way with no access control.

It is recommended to replace Bridge No. 181 with a new structure 64 feet (19.5 m) wide with 5-foot (1.5-m) sidewalks, 250 feet (76.2 m) long with an under-vertical clearance of 16 feet-6 inches (5.1 m). It is also recommended to incorporate TIP Project B-3357 into this project.

Due to the existing geometry, it is proposed to widen the roadway asymmetrically northward in the vicinity of the bridge widening. Division personnel have recommended that this section of roadway be closed during construction of the bridge replacement as adequate detour routes exist in the area.

Graham Street currently intersects SR 1604 approximately 200 feet (61.0 m) west of the existing Bridge No. 181 over US 301. When the new structure is completed, sight-distance problems due to guardrail placement are anticipated. It is recommended to close access from Graham Street onto SR 1604 and to construct a new connection over to Kirby Street (see Figure 1).

It is anticipated that there will be no residences or businesses relocated due to this project.

The total cost is as follows:

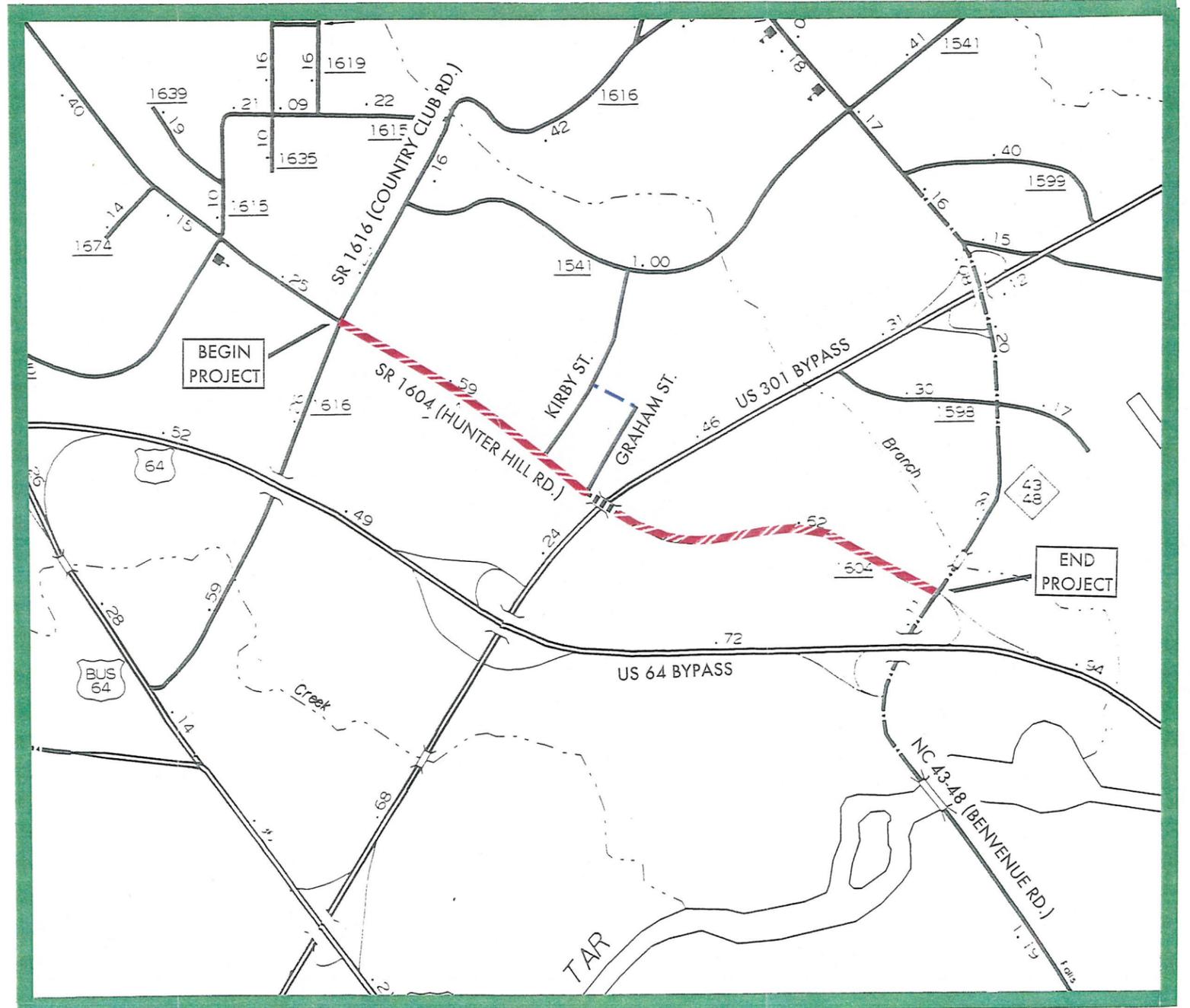
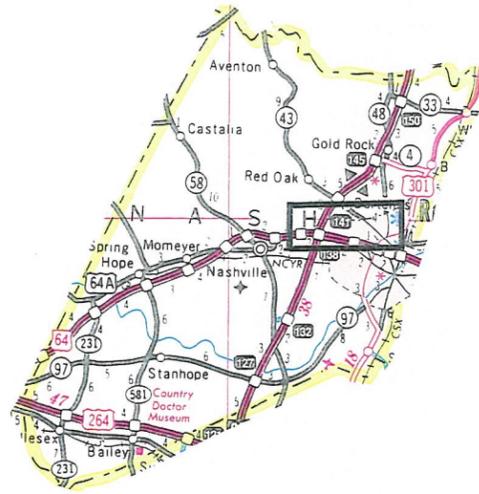
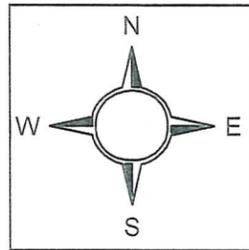
| | |
|-------------------|--------------|
| Construction..... | \$ 4,800,000 |
| Right-of-Way..... | \$ 1,800,000 |
| <hr/> | |
| Total Cost | \$ 6,600,000 |

IV. Other Comments

Retaining walls should be considered in the vicinity of the intersection with SR 1616 (Country Club Rd.) in order to minimize the right-of-way impact to the surrounding businesses.

An environmental screening was not conducted for this study. However, no impacts to historic properties or wetlands are anticipated. Based on maps at the Department of Environment, Health & Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

No special accommodation for bicycles is recommended on this project.



| LEGEND | |
|--------|------------------------------------|
| | PROPOSED FIVE-LANE SECTION |
| | PROPOSED STRUCTURE REPLACEMENT |
| | PROPOSED GRAHAM STREET REALIGNMENT |

| | | |
|---|-------------|----------|
| NC DEPARTMENT OF TRANSPORTATION FEASIBILITY STUDIES UNIT | | |
| U-3621 SR 1604 (HUNTER HILL RD.) FROM SR 1616 (COUNTRY CLUB RD.) TO NC 43-48 (BENVENUE RD.) ROCKY MOUNT | | |
| DIVISION 4 | NASH COUNTY | FIGURE 1 |